United States Patent [19]

Wallsten

[11] **Patent Number:** **4,655,771**

[45] **Date of Patent:** **Apr. 7, 1987**

[54] **PROSTHESIS COMPRISING AN EXPANSIBLE OR CONTRACTILE TUBULAR BODY**

[75] Inventor: **Hans I. Wallsten,** Denens, Switzerland

[73] Assignee: **Shepherd Patents S.A.,** Delemont, Switzerland

[21] Appl. No.: **571,549**

[22] PCT Filed: **Apr. 11, 1983**

[86] PCT No.: **PCT/SE83/00131**

§ 371 Date: **Dec. 7, 1983**

§ 102(e) Date: **Dec. 7, 1983**

[87] PCT Pub. No.: **WO83/03752**

PCT Pub. Date: **Nov. 10, 1983**

[30] **Foreign Application Priority Data**

Apr. 30, 1982 [SE] Sweden 8202739

[51] **Int. Cl.⁴** **A61F 2/06**
[52] **U.S. Cl.** .... **623/1;** 623/12; 623/66; 128/334 R; 128/335; 128/343; 604/281; 604/282
[58] **Field of Search** .... 3/1.4; 128/334 R, 334 C, 128/335, 341, 343; 604/281, 282, 8

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,509,883	5/1970	Dibelius	128/334 R
3,822,238	7/1974	Blair et al.	3/1 X
3,868,956	3/1975	Alfidi et al.	128/345
3,993,078	11/1976	Bergentz et al.	128/334
4,130,904	11/1978	Whalen	3/1.4
4,140,126	2/1979	Choudhury	ʹ604/8 X
4,441,215	4/1984	Kaster	128/334 R X

FOREIGN PATENT DOCUMENTS

8002461	12/1980	Sweden	3/1.4
1205743	9/1970	United Kingdom	128/343

Primary Examiner—Richard J. Apley
Assistant Examiner—Alan W. Cannon
Attorney, Agent, or Firm—Burns, Doane, Swecker & Mathis

[57] **ABSTRACT**

A prosthesis for transluminal implantation comprising a flexible tubular body which has a diameter that is variable by axial movement of the ends of the body relative to each other and which is composed of several individual rigid but flexible thread elements each of which extends in helix configuration with the center line of the body as a common axis, a number of elements having the same direction of winding but being axially displaced relative to each other crossing a number of elements also axially displaced relative to each other but having the opposite direction of winding; and method for transluminal implantation.

12 Claims, 14 Drawing Figures